



LDW

In re the Application of: **Sadao KADOKURA et al.**

Group Art Unit: **1753**

Serial Number: **10/721,081**

Examiner: **Rodney Glenn McDonald**

Filed: **November 26, 2003**

Confirmation Number: **7841**

For: **BOX-SHAPED FACING-TARGETS SPUTTERING APPARATUS
AND METHOD FOR PRODUCING COMPOUND THIN FILM**

Attorney Docket Number: **032120**

Customer Number: **38834**

SUBMISSION OF DECLARATION UNDER 37 C.F.R. §1.131(b)

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

February 10, 2006

Sir:

Further in support of the Response filed on November 22, 2005 and the Supplemental Response filed on December 29, 2005, Applicants submit the attached Inventor's Declaration and Working Journal dated January 30, 2003 along with the translation thereof.

If any additional fees are due with this paper, please charge Deposit Account No. 50-2866.

Respectfully submitted,

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KHS/rf

Enclosure(s): Inventor's Declaration
Working Journal dated January 30, 2003
Translation

NOTEBOOK
Superior

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・ 有機EL 関連 (IV)

2002. 9. 21

~ 2003. 3. 30

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{ [REDACTED] - 170
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A 普通罫

7mm×30Lines 30sheets

SN3A

KYOKUTO

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NO.

DATE 2003/1/30

170. (銅電極型工=ト) 効果確認

$H_{Ar} = 39.0 \text{ sccm}$ $P_{Ar} = 0.3 \text{ Pa}$

7. VZ11.9 : 300W (1A control) 完全DC.

1A : $302^\circ \times 1.0/1$ 300W

500W : $324^\circ \times 1.55A$

39 sccm (0.3 Pa) : $323^\circ \times 1.54$

54 (0.4) : $322^\circ \times 1.54$

70 (0.5) : $320^\circ \times 1.54$

39 (0.3) : $322.5^\circ \times 1.54$

32 (0.25) : $322.4^\circ \times 1.54$

25 (0.2) : $322.7^\circ \times 1.54$

18 (0.15) : $325.3^\circ \times 1.54$

11.5 (0.1) : $335.0^\circ \times 1.54$

$334^\circ \times 1.49$ 500W

②

170-207(B) 500W \times 0.1 Pa \times 240 u.

23 21 5A 21°C $322^\circ \times 1.50 = 499^\circ$ 17.5 sccm 0.1 Pa

↓ ↓ 1' 23°C

21 24°C

30°C 24°C 31 26°C $332^\circ \times 1.49 = 498^\circ$ (24.2 sccm 90%)

4' 27°C

170-208 (D) 500W \times 0.3 Pa \times 240

(170-199) 5A 21°C $320^\circ \times 1.55A$ 500W 39.2 sccm 0.3 Pa

21 1' 27°C $320^\circ \times 1.55A$ 500W

↓ 2' 32°C 320

56°C 3' 35°C $320^\circ \times 1.55$ 488 572/5

4' 37°C 7940

Cover of Working Journal
TRANSRATION

·Related to Organic EL (IV)

2002. 9. 21

~ 2003. 3. 30

·ITO : No104-215

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No.1-46

· :

No.1-44

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-ITO

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DATE 2003. 1. 30

ITO (Confirmation of the effect of the Cu electrode-type unit

$F_{Ar}^{*1} = 39.0 \text{ sccm}$

gas pressure = 0.3 Pa

Pre-sputtering : 300 W (1 A control)

Perfect DC

1 A 307 V \times 1.01 A 309 W

500 W : 324 V \times 1.55 A

39 sccm (0.3 Pa) : 323 \times 1.54

54 (0.4) 322 \times 1.54

70 (0.5) 320 \times 1.54

39 (0.3) 322.5 \times 1.54

32 (0.25) 322 4 \times 1.54

25 (0.2) 322 7 \times 1.54

18 (0.15) 325 3 \times 1.54

11.5 (0.1) 335 0 \times 1.54

334 \times 1.49 500 W

© Professor Hoshi

ITO-207 (B)

500 W \times 0.1 Pa \times 240 sec

St^{*2} 21 °C 333 V \times 1.5 A = 499W 11.5sccm 0.1Pa

23	21
↓	↓
30°C	24°C

*3

1' 23 °C

2' 24 °C

3' 26 °C

4' 27 °C

332 \times 1.49 = 498 W

[24.2 Ω/□
90 %*4

ITO-208 (D)

500 W \times 0.3 Pa \times 240 sec

St^{*2} 21 °C 320 V \times 1.55 A = 500W 39.2 sccm 0.3Pa

(ITO-197)
23
↓
24°C

*3

1' 27 °C

2' 32 °C

3' 35 °C

4' 37 °C

320 \times 1.55A = 500 W

320 \times 1.55 = 488

57 Ω/□

79 %*4

Notes *1: flow of Ar *2: start *3: measured with the conventional box-type unit after 2 minute-depositing *4: light transmittance